

A Fracking Denouement

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New York State's newly nominated Commissioner of the Department of Environmental Conservation has issued a statement that will force the battle over Fracking to come to a head in less than six months. This is both despite and because the Federal EPA is engaged in a comprehensive study to determine the possible and probable negatives effects that Fracking for Natural Gas can have on the environment, infrastructure and people of the Southern Tier of New York State. The Southern Tier is the watershed for over 20 million people, including, New York City, most of New Jersey, Philadelphia and a lot of Eastern Pennsylvania, Baltimore, Northern Maryland and Delaware.

Fracking for N.G. is the drilling of vertical well shafts, and then running up to 16 horizontal shafts off each vertical, along a layer of shale that contains microscopic pockets of N.G. Then millions of gallons of water which contains tens of thousands of gallons various of toxic chemicals is pumped into the shafts, at extremely high pressures, up to 60,000 PSI, in order to force the shale to crack and release the N.G. Somewhere between 30 and 60% of the toxic water is then pumped out for storage or disposal, the rest remains in the ground. The N.G., being lighter than air, then flows up the shafts to be collected in a large network of pipes. The well pipes run to gathering pipes, which in turn run to compressor stations, which pump the gas on to ever larger pipes, which are eventually connected to major distribution pipes. The largest pipes run to major port cities for use and export.

The Marcellus Shale Play (as it is known in the N.G. industry) lies primarily under South-Central NYS and North-Central Pennsylvania. The Marcellus runs from north of Scranton, PA up to about Syracuse NY and east from the western end of PA to almost the Hudson Valley of NY, with the epicenter in NYS Southern Tier's Broome County. Drilling has already begun in PA and serious problems have already occurred. NYS has had a ban on horizontal Fracking for about 2 years, while the DEC has been updating its 1992 Environmental Impact Statement, done a decade before horizontal Fracking was even invented. The DEC's 2009 update was so broadly criticized and rejected by environmental organizations and scientists from all over for its failure to address many major issues; that it was ordered back to the drawing board by former NYS Governor Patterson for a second update. The second update should be ready by about June of 2011. It is with release of this second update that Commissioner Joe Martens said NYS could commence with issuing drilling

permits for Fracking.

However, after the NYS ban was put in place, the Federal EPA held hearings around the country, including in Broome County. The amount of problem issues presented to the EPA hearing panel made the EPA decide to do the comprehensive study currently in progress. A preliminary report should be available within 2 years and a final report and recommendations shortly after. But Martens has said NYS won't wait for the EPA reports. Even though the N.G. has been in the ground for hundreds of millions of years; the pressure from the Gas Conglomerates and a few large gas leaseholders has been very intense on the DEC. Under this pressure the DEC has decided that it can't wait another two years to make what is a truly critical decision, which has enormous and potentially devastating environmental and human consequences.

The environmental, infrastructure and human dangers that many environmental scientists, national and local environmental organizations, and tens of thousands of local citizens are concerned about are extensive and significant. Top of the list, of course, is the danger to the critical drinking water supplies that are in the Southern Tier. The consequences of water contamination are so severe that, just based on current information and problems that have occurred in PA; New York City and Syracuse have already banned any Fracking in the part of the Southern and Central Tiers that contain their water supply. Many Southern Tier residents feel that just the fact, that NYC is convinced Fracking presents a threat to their water is reason enough to ban it state-wide, period. If Fracking is not safe enough for NYC, Syracuse and the Hudson Valley, then it's not safe for the rest of NY's upstate citizens.

The Delaware River Basin Commission which had jurisdiction over much of New Jersey's water supply and the Susquehanna River Basin Commission which has jurisdiction over Eastern PA and Philadelphia's water supply have both instigated investigations of the effects Fracking on the environment, with the potential of possibly issuing temporary bans on Fracking until some definitive studies; including the one by the EPA is available.

Mounting evidence of the environmental dangers of Fracking have gotten so threatening to Big Gas & Oil that have recruited their Republican allies in Washington to propose that the EPA no longer have any authority concerning the use and disposal of toxic Fracking fluid when it come to the contamination of drinking water. This comes on top of the exclusion of the Oil & Gas industry from EPA jurisdiction under the Clean Water and Clean Air Acts, which was arranged during the infamous secret meetings between Vice-President Dick Cheney and the heads of Big Oil & Gas, and put in place by the Republican Congress in 2005. O & G development is demonstrably one of the dirtiest and environmentally damaging industries, so getting them out from under the scrutiny of the EPA would be an enormous favor to Big Oil & Gas. However from the point of view of safeguarding the health and well being of the millions of people in harm's way if Fracking is allowed in NYS; taking and keeping the EPA out of the process of protecting the environment seems oxymoronic; but that's the proposed plan where O & G exploitation is concerned.

The multiple hazards of Fracking only begin with concerns over the safety of drinking water supplies; it doesn't end there. There are many more environmental and health issues for the public to be concerned with. A few examples of the more serious issues are:

The drilling core, the material brought up in the drilling process, can be radioactive. However it is currently being brought from the wells in PA to regular waste dump sites in NY and not being handled as the Hazardous Material and the environmental danger it can be.

The tremendous weight of many Frack fluid tankers on their way to and from well sites, along with other over weight equipment, has and will put strain on numerous of miles of local roads which these roads were not designed to handle. The damage and degradation of roads by Fracking traffic can be seen in Northern PA already. In fact some roads there are so degraded that Fracking fluid trucks now go up into NY from their water pick-up sites in PA and travel through NY's currently better roads, and then head down in PA near where the Fracking fluid will be used. No bonds, permits or fees, contracts to repair damaged roads, upgrades to obviously unfit roads in advance, or any other kind of arrangements have been made with any of the Big Gas & Oil companies involved or schedule to participate in Fracking. There is no commitment by the Fracking companies to pay NYS or any local government entity for the costs of repair or replacement of damaged roads. As thing stand, the entire cost of maintaining and repairing NYS infrastructure will fall on the taxpayers of NYS.

NYS has a remarkable law known as "Compulsory Integration" which means; landowners who haven't signed a lease granting their mineral rights to a Fracking company and/or who don't want any Fracking done under their property, can be forced to allow horizontal shafts to be drilled under their property; if 60% or more of the land in a specific "space" adjoining theirs has gas leases. The "space" is define and delineated up by the G & O leasing company, and the non-lease signing adjoining landowners are forced to allow drilling below their homes or businesses. The landowner who is compelled or forced to integrate their land for Fracking do have to be paid a royalty; however the royalty is less than the adjoining landowners who have "voluntarily" signed leases. This has pitted neighbor against neighbor. In some areas of

NYS a very small number of land owners with large acreage have created a situation where a large number of their neighbors on the 40% of adjoining land are compelled to allow Fracking under their land; even if they are dead set against it, due its danger. There is no law that can reverse the situation; if 60% of adjoining neighbors don't want any Fracking; they cannot force 40% of the landowners in a self-defined "space" to not sign a lease and/or not allow Fracking.

The fears of some people about the dangers of Fracking are based on real occurrences. There have been a significant number of accidents involving the spilling or uncontrolled discharge of toxic Fracking fluids from tanker trucks and storage tanks at well sites. The spills have contaminated streams and neighboring property. Most local authorities do not have the equipment or personal to handle Hazardous Materials spills, the response from the State HazMet teams have been delayed by their distance from the accident. The ongoing expense of either government or outside contractors for the clean-up is another cost not bonded or contracted for in advance; and so again falls upon the taxpayer.

Considering the history of how Big Oil and Gas has failed to accepted responsibility for and how they have handled the economic liability for accidents, spills, etc.; PA and NYS and their local entities should have a detailed set of laws and contracts in place before the first shovel hits the turf. But they didn't and don't. The O & G conglomerates, for their part, do have a detailed plan for dealing with the inevitable accidents of Deep Well Horizontal Slippery Water Hydraulic Fracturing – the full name of Fracking. The first thing they do is raise questions as to who is actually responsible for an event. The company holding the lease is often not the company that is doing the drilling. The company doing the drilling is in turn not necessarily the company providing or installing the piping down in the well. The pipe supplier is almost never the company responsible for inserting the cement around the pipe. The company doing the cementing is not the company that provides the cement. The company providing the Fracking fluid, trucking the Fracking fluid to and from the site, providing the onsite storage tanks for the Fracking fluid, etc. are also different and separate entities. So when it comes to who you gonna sue; it can be a daunting prospect for an individual, a group of landowners or even a municipality. The BP Gulf Oil Spill was a classic example. BP at first said liability belonged to either the owners of the Deepwater Horizon drilling rig or Halliburton who supplied the cement for the pipe. The D-H rig owners said it was BP's or Halliburton's liability. And Halliburton of course blamed BP and D-H. With major contractors, sub-contractors and subsub-contractors all at a Fracking well site and the overall lease-holding G & O company having an army of lawyers who specialize in defending against liability claims; the odds are stacked against individuals, groups, Cities, Counties or States when it come to getting compensation for any level of damages Fracking may cause.

O & G companies deal with claims of actual drinking water contamination in similar ways and worse. The most common form of water contamination complaints has to do with the occurrence of methane (N.G.) in private well drinking water located near a gas well site. The O & G company's liturgy of reaction is first; Denial. They almost always say that either the methane is in the well through natural migration and/or it has been there all along. Natural migration of methane from subsurface pockets is not unknown, but it not very common. To accept the O & G company's claim that every single case of complaints regarding methane contaminated water near a gas well site (over a thousand so far) is due to naturally occurring methane migration and has nothing to do with the nearby drilling of Fracking gas wells, would require the suspension of all reason. The second step of the typical handling of complaints is; Silence. That is to say; silence those complaining. This done by providing clean drinking water, typically by trucking it in and providing "water buffalos" which are large plastic containers for onsite storage of several hundreds of gallons of potable water and/or water filtration equipment, sometimes accompanied by cash settlements and requiring non-disclosure agreement from those receiving the assistance. All the while the O & G companies continue to deny culpability and say they are only providing clean water to those complaining of contamination because they want to be good corporate neighbors. What settling a complaint in this manner accomplishes has less to do with being a good neighbor, than preventing any of these contamination situations from going to court. The proponents of Fracking stake their claim of safety primarily on the statement that; they have never been found guilty of contamination of drinking water in a court of law. That is because they always have settled before a case has gone to court.

The case of what occurred in Dimock, PA just south of the NY border, illustrates the classic cycle of how things play out in real life when a Fracking company is accused of contaminating nearby residential drinking water wells. Starting in 2008, shortly after Cabot Oil & Gas staring drilling Fracking wells in the area, about 18 homes near the small town of Dimock, PA began to complain about the smell and taste of methane in their well water. Some homes even had enough methane in the water that they could light the water running from their kitchen faucet. One resident had the cover of his septic tank blow off in an explosion caused by the buildup of methane. Cabot immediately denied any responsibility, but began providing water to some residents. After almost two years of continued complaints by residents and continued refusal to accept responsibility by Cabot; the PA Department of Environmental Protection stepped in. The PA DEP conducted an investigation and determined that Cabot O & G was indeed responsible for the methane contamination. Cabot signed a Consent Order which acknowledged their responsibility for the methane contamination. The DEP suspended all of Cabot's drilling operations until the cause of the contamination and resolution of the problem for the victims was satisfactorily dealt with by Cabot. The DEP decided that it had no confidence in the safety of the entire under lying aquifer and ordered Cabot to put in a buried water pipeline to the affected home from a municipal water supply several miles away. The cost to Cabot would be about 12 million dollars. When they heard the price of the solution Cabot

again began to deny the contamination was their fault, despite the fact that the DEP investigation had discovered the contaminations cause; 3 of the 9 Fracking wells drilled in the area had methane leaks cause by cracks due to faulty cementing of the vertical pipes. The DEP told Cabot that they would go ahead with building the water line and bill Cabot for the work. Cabot came up with a counter offer in which they would; pay each victim double the price of what their house was worth; provide them with a complete water treatment system and/or continue to deliver water; and of course, included a non-disclosure clause. Their offer would cost Cabot only 4.5 million. The Director of the PA, DEP (who was soon to be replace by a new O & G friendly Governor) suggested that the homeowners take the deal or they might face a reversal of his pipeline mandate and face years of court battles fighting with Cabot about a solution to their water problems. Most of the homeowners settled, a few have decided to go to court, down a long road. Cabot still sticks by their denial of responsibility and claims the Consent Order they signed was a mistake by their CEO and CLO, who supposedly misunderstood what it meant. Until the cases in Dimock finally come to court; the O & G industries record of no convictions still stands. The 4.5 million they paid out was not an admission of responsibility, merely a good neighborly thing to do. The environmental contamination and the treatment of the victims of Fracking at the hands of the G & O companies is the subject of the 2010 Oscar nominated documentary "Gasland". The director Josh Fox made some of this film in the Dimock area. The Federal EPA investigation will very likely use Dimock as one of their study cases.

Another major problem with the O & G industry claims concerning the safety of Fracking is that most of the industry provided numbers refer to only vertical wells. The vertical wells use only a small fraction of the amount of Fracking fluid that the horizontal wells needed for the Marcellus Shale formation use. The industry also says Fracking has been around for decades and used on many thousands of wells; this too refers to only vertical wells. Horizontal Fracking has only been around less than ten years. Among the 1500 Fracked horizontal wells in PA there have been over 2000 different complaints, safety citations made, finable offenses recorded, etc. Some wells have had none; others have been the object of investigation multiple times, which may reflect on the industry's style or ability when dealing with problems. All the Fracked horizontal wells have been in very rural areas of the U.S. In Wyoming and Colorado the wells have been done on virtually empty land with a population density of less than 1/100th of the semi-rural, suburban and urban populations found in the Marcellus Shale area of NYS. Nor has the proposed density of the Fracked wells been anywhere near comparable. The number of wells proposed for the heart of the Marcellus Shale in NY is from 4,000 to 10,000; putting the wells much closer together and much closer to many more water wells than where Fracking has been done before. This will make virtually the entire Southern Tier close enough to Fracking wells to be vulnerable to the possible contamination of the water, air and land.

Other complaints about the Fracking industry involve the illegal dumping of used Fracking fluid in public streams and rivers when no one is looking. The industry concedes that this does sometimes happen, but says it is not industry policy, just the actions of rogue sub-contractors. Another problem just coming to light is the numerous leaks in gas pipelines, both old and new. The leaking methane is a much more destructive green house gas and great cause of global warming than CO2. With an increase of hundreds of miles of gas pipelines and many connection and pumping stations, the air quality dangers will be considerably increased. But the industry offer no remedies for these acknowledged problems, only contributions to Congress members who favor support further exclusion of the O & G industry from EPA control, when it comes to dumping Fracking fluid and leaking gas lines under the Clean Air and Water Acts and the Safe Drinking Water Act.

After the claim of never being convicted, the Fracking industry uses the claim of N.G. being a transition fix for America's energy problems as their second line of defense. However the economics of this claim is highly suspect. At the current price of N.G.; drilling a Fracking well is a break even prospect at best. It would take a 50 to 100% price increase to make the profits on Fracked gas competitive with the profits on the other hydrocarbon fuels these companies are already selling. In fact several O & G companies are already shifting their resources from Fracking to oil exploitation because the profit is greater. Some O & G companies have come up with an idea to help them defray the expense of Fracking for N.G. The idea is to add additional Federal subsidies to those already in place for the hydrocarbon fuel industry. Major players such as T. Boone Pickens have called for another 20% subsidy for N.G. and to have the Federal government share the cost of converting the entire U.S. fleet of eighteen wheelers to N.G., at a cost for the U.S. taxpayer of 4 billion dollars. Once the trucking industry is committed to N.G. as a fuel; the increase in price to twice or more the current rate should be no problem for the O & G special interests.

The case of Fracking being as safe as the O & G conglomerates say is substantially weaken by some of the Frackers behavior. They for years consistently refused to disclose the details of the contents of Fracking fluid; claiming the contents are "trade secrets". However many of the ingredients have been found out by environmental scientists in several universities. The list of Fracking fluid contents when all the various formulas used are combined is several hundred chemicals long. Many of these chemicals are known or suspected carcinogens and/or endocrine inhibitors. After a threat by the EPA to take them to court; some of the companies have released a partial list of some of the ingredients, saying they are updating their formulas to make them "greener". Another and even more damning piece of evidence of the dangers of Fracking can be found in the Annual Report of every O & G Company involved in Fracking. Unlike on their websites where they only list the supposed benefits of Fracking; in their Annual Reports the O & G companies being

publically traded; are required by law to list all the realistic risks shareholder might face when purchasing stock. The published risk list is a long list, containing, but not limited to, everything from explosions destructive to life and property to significant environmental damage to civil and criminal penalties. You don't see much mention of any of that in the huge PR campaign TV ads the Fracking industry is bombarding the Southern Tier with.

Although the Frackers claim the Marcellus Shale Play will be a huge help toward U.S. energy independence; the truth is that the amount of N.G. that can be profitably extracted is just a small percent of the U.S. needs. Most energy analysts consider the Marcellus N.G. just a short term "transition" energy source; about ten years worth of part of the N.G. needs for some of the U.S. East Coast or more likely to be exported to offset oil imports. The same short term, limited number of opportunities also applies to the jobs the G & O industry has promised as a lure to NY and PA politicians. 90% of the jobs will be filled by experienced gas rig roustabout workers from Texas & Oklahoma, with just a few jobs, mostly in the hauling of materials, to be filled locally.

On the issue of revenue from Fracking N.G. the promises of tax help on the local level proffered by local Pols is very limited. Some small amount of sales tax may be generated, but this is split between the Counties and State. Property tax revenue could be increased, but only if the state, county and local governments, along with the school districts were to reassess each leased property, each year, based on either the lease payments or the value of the N.G. gas produced. This possible source of revenue would of course be offset by the need to lower the assessments, due to the decrease in property value, of the 90% majority of the land and homes which are not producing N.G. The significantly lower values would be because a lot of local homes will now be in areas that were once zoned residential; but are now de facto zoned industrial. They will very much look like industrial areas due their being surrounded by N.G. rigs, compressor stations, pipeline junctions, etc.

In all but two states of the 23 where N.G. production occurs, there is a Severance Tax levied on N.G. Those two states are PA & NY. A Severance Tax is levied on the N.G. producer, based on the value of the natural resource being taken (or severed) from property in the state. In Alaska for example the Severance Tax is enough that each adult citizen of the state gets a substantial check from the Severance Tax paid to the state by the O & G companies drilling and pumping down the Alaska Pipeline from the North Slope. PA has already rejected a Severance Tax when it was proposed in the State Legislature in 2010. One of the Pols leading the group that defeated the bill was recently cited for; accepting a private airplane trip; a hotel suite; and tickets to this year's Super Bowl, all provided by one of the major O & G companies working in PA. The NY legislature hasn't even suggested a look at a Severance Tax. The Fracking N.G. companies are willing to lease the property for up to ten times the value of what the land is worth if it were sold, because after they are through Fracking the property and move on; the land owners are still liable for any damages or clean up that may be required by the State or local government. Of course having made their money, some of the larger landowners could just not pay their taxes and abandon the land; leaving the State owning the property and stuck with having to pay for any of the problems created or caused by the Fracking. Since the leases are a per acre arrangement; smaller landowners, who didn't receive enough to cover the value of their property or homes, would be stuck with a property of questionable value and any of the Fracking residue issues and liability.

All in all, the possibility and probability of the multiple dangers of Fracking keep mounting in number and volume. They have added up to a much great risk to many more people than any possible reward to the Southern Tier, NYS or the country at large. Only a few O & G conglomerates, some of which are foreign owned and controlled, and a few large land holders stand to gain economically in a major way. On the other side, literally millions of people are at risk of having their water supply contaminated in ways that may not be remediable. Hundreds of thousands of upstate citizens are in danger of having their infrastructure, their property values, their health and safety and their overall well being, ruined or destroyed for a very short term profit for a very few.

The extremely high stakes confronted in allowing Fracking to proceed is why the O & G industry refers to Fracking areas as a "Play". It is also the reason that the EPA, even with some limits imposed and threatened on its policing authority, has insisted on going forward with a complete and comprehensive study and report on the safety of Fracking. If the industry wasn't afraid of the results of the report, they wouldn't be in such a mad rush to begin Fracking in NY. They know it will more difficult to stop them once they have exchanged cash and promises for permission from the Pols. The N.G. has been in the ground for 350 million years and right now Fracking to extract it is neither safe nor economically advantageous without a substantial increase in the price of N.G. and/or government corporate welfare. The majority of New Yorkers, both upstate and down feel it is extremely unwise to use such a dangerous process like Fracking, which risks precious and irreplaceable resources. An outright ban on all Fracking is the surest, safest plan and one which most environmental scientists and others knowledgeable on the subject favor. Certainly issuing a comprehensive temporary ban on Fracking and waiting for the Federal EPA study to be finished and reported out is the absolute and essential correct minimum course of action for NYS. It is the only responsible way to protect the people of NYS; which are the first and foremost job of government, at every level.

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